UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/774,775	02/09/2004	Yun-Hwan Kim	8836-217 (IB12294-US)	8837

22150　　　7590　　　04/03/2006	EXAMINER
F. CHAU & ASSOCIATES, LLC 130 WOODBURY ROAD WOODBURY, NY 11797	KO, DANIEL BOKMIN

ART UNIT	PAPER NUMBER
2189	

DATE MAILED: 04/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/774,775	KIM ET AL.
	Examiner	Art Unit	
	Daniel B. Ko	2189	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 09 February 2004.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 09 February 2004 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

This action is responsive to the application filed on 2/9/2004. Claims 1-24 have

been submitted for examination.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which

papers have been placed of record in the file.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Chauvel et al. (US Patent 6,369,855 B1), hereinafter simply Chauvel in view of

Sussman et al. (US Patent 5,686,960), hereinafter simply Sussman.

Regarding claim 1, 5, 9 and 17, Chauvel teaches a computer system comprising:

a system bus (column 6, lines 10-11; column 9, lines 30-32);

a host processor for receiving, decoding, and executing an instruction (column 5, lines 26-28);

an arbiter for controlling priorities for system bus access (column 21, lines 14-19);

a data processing unit for performing a digital signal processing operation subject to the host processor (column 23, lines 17-19); and

an external memory for storing data managed by the data processing unit (column 9, lines 60-66);

wherein the data processing unit comprises:

a microprocessor for fetching and executing an instruction (column 5, lines 26-28);

a coprocessor for storing data managed by the microprocessor (column 12, lines 29-31);

a microprocessor data cache for storing data managed by the microprocessor (A data cache managed by microprocessor is an obvious feature that is well known in the computer art).

Chauvel fails to teach an X-data cache and a Y-data cache. Sussman teaches an X-data cache and a Y-data cache (Fig. 30, X cache 608, Y cache 614; column 33,

lines 28-34). At the time of invention it would have been obvious to a person of ordinary

skill in the art to combine the Chauvel with Sussman. The motivation for doing so would

have been an efficient processing of data such as an image or video by implementing

Sussman's X cache memory and Y data cache memory, because accessing from cache

is faster than accessing from the main memory.

Regarding claims 2, 16, 14 and 22, Chauvel teaches a data processing device,

wherein the microprocessor conducts arithmetic operations for integers and floating

points, and Boolean functions (this is an obvious feature that is well known in the art).

Regarding claims 3, 7, 15 and 23, Chauvel teaches a data processing device,

wherein the coprocessor executes a digital signal processor function operable with at

least one of video, audio, video capture and play-back, telephone communication, voice

identification and synthesis, and multimedia communication (column 5, lines 23-39;

column 34, lines 58-67; column 35, lines 15-42).

Regarding claims 4, 8, 16 and 24, Chauvel teaches a data processing device,

wherein the digital signal processor function is micro-coded with at least one of finite

impulse response and infinite impulse response filters, a Fourier transform, a correlation

function, a matrix multiplication, and a Taylor series function (column 3, lines 57-67;

column 4, lines 1-59; Chauvel discloses a matrices).

Regarding claims 10 and 18, Chauvel teaches a computer system, further comprising a slave in accordance with a need of a user (column 16, lines 28-33; column 60, lines 16-29).

Regarding claims 11 and 19, Chauvel teaches computer system, wherein the slave comprises at least one of a storage extension module, a video control extension module, a multimedia extension module, and a communication extension module (column 5, lines 23-39; column 34, lines 58-67; column 34, lines 15-42; column 60, lines 16-29).

Regarding claims 12 and 20, Chauvel teaches a computer system, further comprising a decoder for addressing the data processing unit and the slave (column 5, lines 40-43).

Regarding claims 13 and 21, Chauvel and Sussman teaches a computer system, wherein the external memory comprises:

a microprocessor data field for storing data to and/or from the microprocessor data cache (A data cache managed by microprocessor is an obvious feature that is well known in the computer art);

an X-data field for storing to and/or from the X-data cache; and

a Y-data field for storing to and/or from the Y-data cache (Fig. 30, X cache 608, Y cache 614; column 33, lines 28-34).
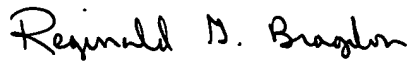
Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Daniel B. Ko whose telephone number is 571-272-8194.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Reginald G. Bragdon can be reached on 571-272-4204. The fax phone

number for the organization where this application or proceeding is assigned is 703-

273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Daniel B. Ko
AU 2189

REGINALD G. BRAGDON
PRIMARY EXAMINER